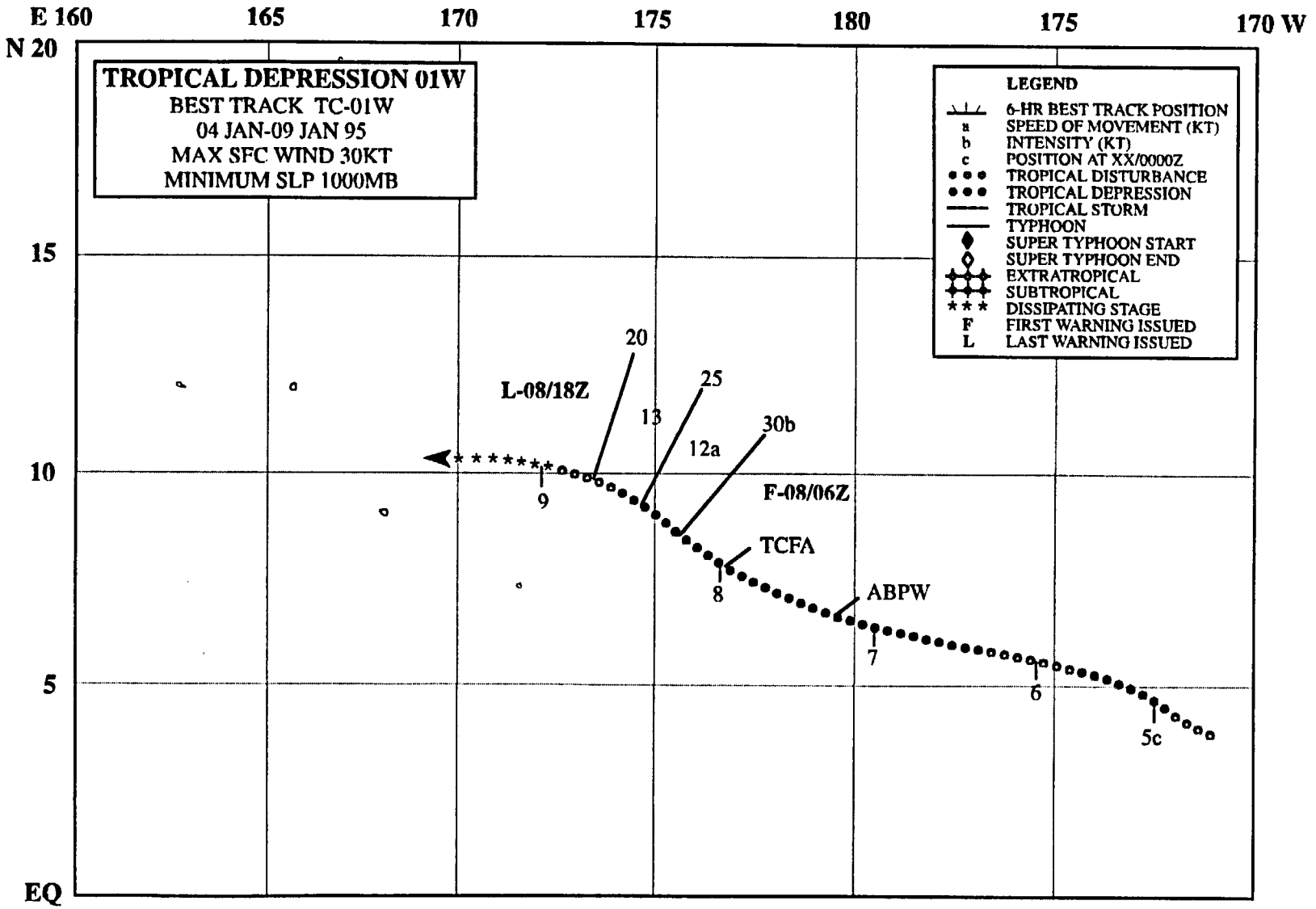
E 160
165
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EQ
TROPICAL DEPRESSION 01W
BEST TRACK TC-01W
04 JAN-09 JAN 95
MAX SFC WIND 30KT
MINIMUM SLP 1000MB
LEGEND
6-HR BEST TRACK POSITION
a SPEED OF MOVEMENT (KT)
b INTENSITY (KT)
c POSITION AT XX/0000Z
TROPICAL DISTURBANCE
TROPICAL DEPRESSION
TROPICAL STORM
TYPHOON
SUPER TYPHOON START
SUPER TYPHOON END
EXTRATROPICAL
SUBTROPICAL
DISSIPATING STAGE
F FIRST WARNING ISSUED
L LAST WARNING ISSUED
L-08/18Z
20
25
13
30b
12a
F-08/06Z
TCFA
ABPW
9
8
7
6
5c

TROPICAL DEPRESSION 01W

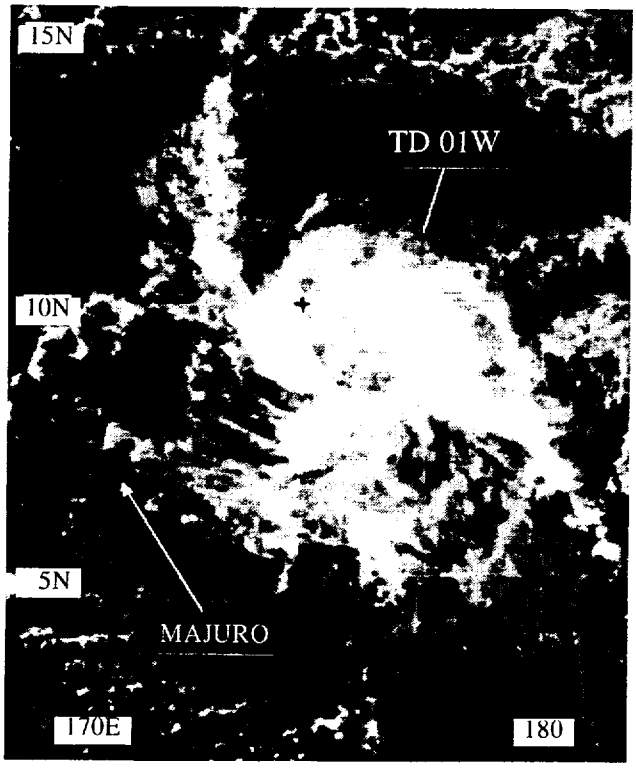

Figure 3-01-1 Tropical Depression 01W shortly before the time of the first warning (080331Z January visible GMS imagery).

I. HIGHLIGHTS

The first significant tropical cyclone of 1995 in the western North Pacific, Tropical Depression 01W formed east of the international date line, moved westward, and dissipated in the Marshall Islands after only a brief life span. This tropical depression formed at the eastern reaches of the near-equatorial trough of the Northern Hemisphere at a time when the axis of this trough had extended far to the east of its typical climatological position — a large scale circulation anomaly associated with the warm phase of El Niño/Southern Oscillation (ENSO) conditions in the tropical Pacific.

II. TRACK AND INTENSITY

The tropical disturbance that became Tropical Depression 01W was first detected east of the international date line, and was first mentioned on the 040600Z January Significant Tropical Weather Advisory as a low-level cyclonic circulation that was a Northern Hemisphere twin to another cyclonic circulation that was located in the Southern Hemisphere. This Advisory stated:

"[an] area of convection . . . is now located near 10°S 180°. . . . A flare up of convection is [located] on the northern side of the low-level circulation. A "twin" low-level circulation exists in the Northern Hemisphere near 5°N 175°W and the two may be enhancing each other . . ."

During the next few days, the tropical disturbance in the Northern Hemisphere moved westward, crossed the international date line and entered the western North Pacific basin. As this tropical disturbance approached the Marshall Island group in the early morning hours of 08 January, a major flare-up of a very cold topped mesoscale convective system (MCS) occurred near the low-level circulation center, and this event, coupled with a twenty-four hour pressure fall of 2 mb at Majuro (WMO 91366),

prompted the JTWC to issue a Tropical Cyclone Formation Alert at 072300Z. During the day on 08 January, the deep convection of the MCS collapsed, leaving behind well-defined cyclonically curved low-level cloud lines accompanying a curved band of deep convection on the northern side of the low-level circulation center (Figure 3-01-1). Based upon these improvements in organization, the first warning valid at 080600Z January on Tropical Depression 01W was issued.

Synoptic data from the Marshall Islands at 081200Z January, indicated that Tropical Depression 01W was not well developed at the surface. The Prognostic Reasoning message that accompanied the 081200Z warning included commentary on the implications of the synoptic reports in the Marshall Islands:

"Tropical Depression 01W . . . is weak, with the primary cyclonic circulation existing in the midlevels of the troposphere. Synoptic reports from the eastern Marshall Islands do not yet support a well defined low-level vortex. . . ."

When the first-light visual satellite imagery and synoptic data on the morning of 09 January did not show evidence of a low-level circulation center, the 081800Z warning on Tropical Depression 01W was amended at 082153Z to become the final warning.

III. DISCUSSION

Tropical Depression 01W formed in a low-level wind pattern associated with the twin-trough pattern that is commonly observed during the simultaneous occurrence of tropical cyclones on both sides of the equator (Figure 3-01-2). The twin near-equatorial troughs and the equatorial low-level westerly winds associated with Tropical Depression 01W and its accompanying unnamed southern twin, were located well to the east of their typical climatological position. Beginning in October of 1994 and extending into January of 1995, low-level westerly winds had persisted to the east of the international date line at low latitudes. This eastward push of monsoonal westerlies was associated with a warm phase (i.e., El Niño conditions) of the ENSO that had dominated the climate of the Pacific basin for all of 1994. El Niño continued to affect the large-scale wind flow of the tropical Pacific during early 1995, but it later waned, and easterly winds began to dominate the low-level flow in the deep tropics of the western North Pacific basin for much of the rest of 1995.

IV. IMPACT

No reports of significant damage or fatalities were received.

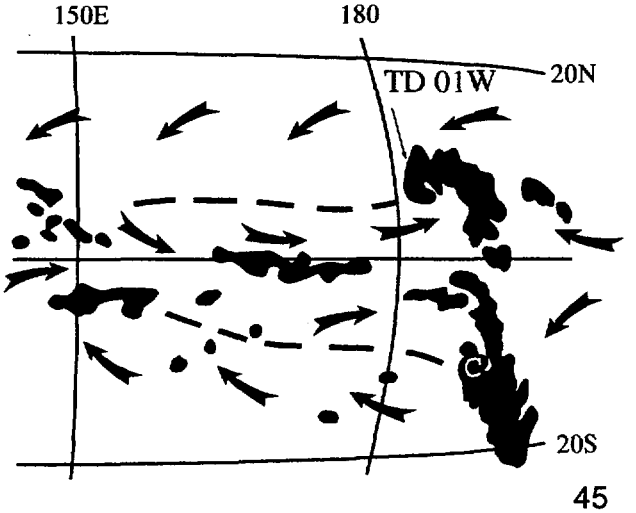

Figure 3-01-2 Cloud silhouettes based on the 070231Z January infrared GMS imagery show patterns typical of the distribution of deep convection within the twin-trough pattern of the low-level monsoon flow. The low-level winds are indicated by arrows, the trough axes by large dashed lines, and the twin cyclones are located in the cloudiness at the eastern ends of the trough axes.